

New Species of Crane-flies from California (Dip.).

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Kansas.

The following new species of crane-flies were included in a collection of undetermined material sent to me for naming through the kindness of Mr. Millard C. VanDuzee, to whom I am indebted for this, as well as many other favors in the past.

The types are in the writer's collection.

Family TANYDERIDAE.

Protoplasa vanduzeei sp. n.

Size small (wing under seven mm.); wing long and narrow, spotted and clouded with grayish, the pattern heaviest on the anterior half of the wing, including the entire costal cell.

♂. Length about 5 mm.; wing 6.3 mm.; greatest width of the wing 1.2 mm.

Rostrum brown; mouth parts and palpi dark brown. Antennae dark brown, short, apparently 16-segmented, the segments with pale hairs. Head light brown with a dark brown dorso-median line.

Pronotum brownish. Mesonotal praescutum light grayish-brown with three brown stripes, the middle stripe broad, split by a narrow pale line; lateral stripes less distinct; remainder of the mesonotum grayish-brown; the scutellum fringed with about 15 long hairs. Pleura light grayish-brown. Halteres dark brown, the extreme base and the stem paler. Legs with the coxae and trochanters pale yellowish-brown, sparsely gray pruinose; femora pale yellowish-brown, the apices darker; tibiae pale brown tipped with darker; tarsi dark brown.

Wings long and narrow, subhyaline with a heavy gray pattern, as follows: costal cell: large clouds at the base of cells *R* and *M*, at the base of *Rs*, along the cord and at the fork of veins R_2+3 ; most of these markings lie on the anterior half of the wing, those on the posterior half located at the wing margin at the ends of the longitudinal veins and scattered along the veins as rounded spots. Venation: all veins long and slender, conforming to the extreme narrow shape of the wing; *m-cu* cross-vein obliterated; anal angle of the wing not as distinct as usual in the genus.

Abdominal tergites light brown basally, dark brown on the apical half, the extreme caudal margin narrowly ringed with pale; sternites paler. Hypopygium with the pleural appendages orange, bi-lobed, the dorsal lobe elongate, slender, the ventral lobe short, stout, obtusely rounded.

Holotype: ♂, Los Cerritos, California, March 14, 1915. (M. C. VD.)

This interesting fly is closest to *P. vipio* O. S. but is a very different species, being much smaller and showing unmistakable signs of degeneracy of the wings. I take great pleasure in dedicating this interesting crane-fly to Mr. VanDuzee, who collected the type specimen.

Family TIPULIDAE.

Tribe Eriopterini.

Erioptera (Erioptera) cinctipennis sp. n.

Coloration gray, praescutum with four narrow brown stripes; wings dusky, cross-banded with subhyaline.

♂. Length 4.5-5 mm.; wing 5.4-5.7 mm.

Rostrum and palpi black. Antennae black, short, the flagellar segments short, oval, with a dense pale pubescence. Head dark gray.

Pronotum gray, the scutellum more yellowish. Mesonotal praescutum brownish-gray with four narrow brown stripes, the intermediate pair longer; pseudosutural foveae elongate, conspicuous, jet black, extending obliquely across the segment just in front of the lateral stripes; scutum gray with two brown spots on each lobe; scutellum and postnotum light gray. Pleura clear light gray. Halteres light yellow throughout. Legs with the coxae brown, sparsely gray pruinose; trochanters and femora brown, the latter broadly darkened apically; tibiae and tarsi dark brown.

Wings comparatively narrow, strongly suffused with dark brown, the basal portion of the wings, a broad band before the cord and the broad subapical regions clearer, presenting an appearance of a clear narrow band before the cord and a broader brown band extending from the stigma across the wing; stigma distinct, dark brown; veins dark brown. Venation as in subgenus; R_{2+3} usually short, about equal to, or a little longer than, r or $r-m$; second anal vein not greatly sinuated.

Abdomen dark brown, the apices and lateral margins of the segments narrowly pale and with sparse golden hairs. Hypopygium more reddish.

Holotype: ♂, Los Angeles, California, April 29, 1915. (M. C. VD.)

Paratopotypes, four ♂, April 26-May 3, 1915.

Paratypes, two ♂, Los Cerritos, California, March 21, 1915. (M. C. VD.)

This handsome species is readily told from related species of the subgenus by its handsomely banded wings, in this respect suggesting the South African *E. peringueyi* Bergroth.

Tribe Linnophilini

Phyllolabis flavida sp. n.

Coloration pale yellow; wings nearly hyaline, stigma lacking; vein *Sc* long, *R*₂+*3* arcuated, about equal to cell *R*₂ alone; inner end of cell *1st M*₂, slightly proximad of *r-m*.

♂. Length 5.3 mm.; wing 5.5 mm. ♀. Length 4.8 mm.; wing 5.8 mm.

Rostrum and palpi pale yellow. Antennae elongate, in the male, if bent backward, extending about to the base of the abdomen, the flagellar segments cylindrical, with moderately long hairs; antennae pale yellowish, the terminal segments darker. Head brownish-yellow; eyes large, black.

Thorax pale brownish-yellow, without distinct stripes. Halteres elongate, pale, the knobs brownish. Legs pale yellowish, the tarsi dark brown.

Wings rather broad, pale, subhyaline, stigma lacking; veins brown. Venation: *Sc* long, ending just before the middle of *R*₂+*3*; in the other described species of the genus *Sc* is much shorter, ending just beyond the fork of the sector; *R*₂+*3* arcuated, shorter than, or subequal to *R*₂ alone; inner end of cell *1st M*₂ slightly proximad of *r-m*.

Abdomen pale yellowish, the segments ringed caudally with darker. Segments eight and nine, and the posterior half of seven, black; hypopygium orange-brown. Male hypopygium with the caudal projection of the eighth sternite long, slender, narrow at the base, gradually and slightly expanded toward the apex, which is bilobed and pubescent; just dorsad of this blade are two needle-like blades. Lateral prolongations of the pleurites elongate, curved, fringed at the tips and along the sides with long stout hairs, the apical portion of this arm expanded. Ventral inner pleural appendage sickle-shaped, with a slender handle, the blade widely expanded, curved outwardly, the acute tips directed inwardly; dorsal inner pleural appendages bifid, the inner arm longest and decussate with its fellow of the opposite side.

Holotype: ♂, Alpine, San Diego County, California, April 10, 1915. (M. C. VD.)

Allotype: ♀, with the type.

Related to *P. claviger* O. S. in the lack of a stigmal spot to the wings, but very distinct in its pale coloration, venational details, and, especially, the peculiar male genitalia.

***Limnophila (Dactylolabis) nitidithorax* sp. n.**

Wings deeply suffused with brown, unspotted; body-coloration dark brown, somewhat shiny; legs at the base, including the coxae, yellowish.

♂. Length 6.2-7 mm.; wing 6.4-7.1 mm.

Rostrum and palpi dark brown. Antennae short, dark brown; head broad between the eyes with long scattered black hairs; head brownish-black, very sparsely grey pruinose.

Thoracic dorsum dark brown, without distinct stripes, sublustrous, very sparsely pruinose; dorso-pleural membranes dull brown. Pleura similar to the dorsum. Halteres short, yellow. Legs with the coxae yellowish, the outer faces at the base darkened; trochanters yellow; femora yellow, the tips dark brown; tibiae and tarsi brown.

Wings with a strong brownish tinge; veins dark brown. Venation as in the subgenus; *r* at the tip of *R1*; *R2+3* short to very short; *R2* nearly perpendicular at its origin; cell *M1* deep, longer than its petiole; basal deflection of *Cu1* at, or just beyond, the fork of *M*.

Abdomen dark brownish-black, the caudal margins of the segments and a narrow dorso-median line black; hypopygium black; ventral pleural appendages very long, digitiform, longer than the pleurites.

Holotype: ♂, Berkeley, California, May 16, 1915. (M. C. VD.)

Paratopotypes, three ♂.

The only regional species of this subgenus with the wings unspotted is *L. (D.) hortensia* Alex. (British Columbia), a grayish fly with quite a different wing-venation.

The Lake Mosquito, *Mansonia titillans* Walk., and its Host Plant, *Pistia stratiotes* Linn., in the Canal Zone, Panama (Dip. : Culicidae).

By L. H. DUNN, formerly Entomologist of Board of Health Laboratory, Ancon, Canal Zone.

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We have noted a few virgin females that, when confined in cages, would take a blood meal nearly every day; one specimen took 14 blood meals in 17 days, which is the longest time that we have been able to keep *M. titillans* alive in captivity.

In some instances the bite of this mosquito is quite painful and produces considerable irritation. In other cases their bites